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Peak Performance

Megaprojects, Transportation Sector Keeping Design Industry Busy

Design firms still riding high despite challenges in attracting talent, changing technologies, and a dwindling residential market.

by Adrian MacDonald

Architects, engineers and consultants in the New York area say that with the exception of a declining residential market, all sectors have been at peak levels in the last few years.

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In New York especially, industry leaders say business will remain strong for years to come thanks to a spate of megaprojects in the city, including \$22 billion of work in Lower Manhattan, \$3 billion in sports stadium and arena projects, and several public transportation projects in the billions of dollars in New York City and northern New Jersey.

“Any one of those projects would be the entire capital plan for some cities, and there are eight to 10 of them in New York,” says Michael Della Rocca, president of the New York City-based architecture/engineering firm STB Group. “The scale is unprecedented. Projects that have been on the drawing board for years are coming closer to reality.”

Projects such as the \$2.8 billion Freedom Tower in downtown Manhattan, the nearly \$16 billion Second Avenue subway line and the \$2.8 billion World Trade Center Transportation Hub, as well as several major league sports facilities projects in the Bronx, Queens, and New Jersey, have kept design firms busy throughout the region over the last few years, says Stuart Lerner, vice president with the New York office of Stantec, a large design and consulting services firm with offices throughout the US and Canada.

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“The New York market seems to be quieting down on the design side,” he says. “If you’re not in on the large projects, there aren’t as many medium and small projects. All the money is tied up in the [megaprojects].”

And many of the high-profile smaller projects, especially in the New York City residential sector, have gone to celebrity architects such as Charles Gwathmey, Richard Meier, and Jean Nouvel, who has recently designed two luxury condominiums in Manhattan, including the “Vision Machine” at 100 11th Ave.

But Della Rocca disagrees that the megaprojects are the only gigs in town these days.

“While there has been some moderation of the market by the big projects, there still seems to be a steady stream of other work,” he says.

Less-established companies are still making huge gains in the city. Mark Baker, president of Boca Raton, Fla.-based IBA Consulting, says he opened a New York office last year despite his initial perception that the building boom was coming to a close. IBA focuses almost exclusively on building envelope design.

“I thought we’d missed the boom,” he says. “But we did our market research between May and June last year and realized we didn’t miss it. There’s just so much going on.”

Baker says his firm has taken on a policy of opening an office per year nationwide ever since it branched out to Las Vegas in 2004. IBA Consultants now has 7 offices, including New York, Seattle, Miami, Pensacola, and Tampa Bay.

“The work is out there,” he adds. “We spend a lot of time identifying markets. One office per year sounds like a rapid pace, but that was actually meant to slow us down because we had so many opportunities.”

Baker adds that New York is unique around the country in that a large proportion of designers are working on projects overseas, largely in Asia and the Middle East. New York-based companies like AECOM and Parsons Brinckerhoff do a large proportion of business overseas, says Della Rocca. IBA limits its activities strictly to North America.

Baker says he also finds that price is not as important for clients as much as quality in the current market. “It’s like the opposite of a price squeeze,” he says. “Clients are more interested in the resumes of your consultants than your rates.”

Della Rocca agrees, but cautions there is a distinction between public and private owners in this assessment. “Private is more ready to pay top dollar,” he says. “In public they have precise expectations on payment for services and approved salary schedules so it’s not as influenced by the market.”

New York’s city government, likewise, has ended its lowest-bidder requirement. STB Group’s Della Rocca, a past president of the New York chapter of the American Council of Engineering Companies, says this has led to an increase in quality all around.

“Now, of your four or five companies bidding, you take the best quality bid and then negotiate the price,” he says. “The industry is appreciative of this.”

He adds that he remains baffled by New York Gov. Eliot Spitzer’s decision earlier this year to veto a bill that would eliminate the lowest-bidder requirement on government projects statewide.

In such a strong market, many design firms say they are strapped for talent, even as fees and salaries go up.

“Salaries for engineers graduating from college are probably 10-15% greater than just a few years ago,” says Paul Brady, president of the Connecticut chapter of the American Council for Engineering Companies. “Virtually every engineering firm I know has unfilled positions.”

In Connecticut, Brady says transportation and environmental projects are becoming key industry drivers, thanks to increased funding from the state’s General Assembly. The assembly is set to approve \$110 million in bonds for the state Clean Water Fund, he says. Two projects that would benefit are the New Haven Regional Water Pollution Control Authority’s \$300 million project for correcting combined sewer overflow problems, and the Metropolitan District Commission (Hartford area) Clean Water Project, a \$1.6 billion project.

New Jersey remains strong as well, according to Jerome Eben, New Jersey chapter president of the American Institute of Architects.

"I don't see a slowdown," he says. Eben adds that even in the residential sector, the market for home renovations is still healthy assuming homeowners use architects for their remodel projects.

"We try to get the message to the public that investing in architecture, with architects working directly for the client, is the best investment you can make," he says. "To me, the architect is the master builder and controls the project."

Design-Build Surging

Design professionals agree that design-build has become significantly more popular in the last several years, although its use has leveled off some recently with the realization that it is appropriate only for certain projects.

"There are advantages and disadvantages to design-build," Brady says. "It depends on the situation and the particular owner. Design-build is not a good idea for every project by any means. It's a useful method of organizing a construction project but not a panacea for everything."

Brady adds that the method works well in projects that are well defined and where the owner has a qualified staff or advisor who can properly define the project and oversee the design-builder.

Lerner, the Stantec VP, says his firm is doing more design-build projects, including the South Ferry project currently wrapping up in Lower Manhattan. "It changes how you schedule and estimate," he says. "Design-build is a much shorter time frame."

Ken Gible, principal with Old Saybrook, Conn.-based GNCB Engineers, is dismissive of the concept of a growing market for design-build.

"More design-build seems to be in the trade magazines only," he says. "We were doing design-build 35 years ago and are still doing about the same amount."

Gible adds that design-build is a great process when a project-experienced owner selects a provider directly or uses a quality-based selection process, and the CM and design team have prior working experience. "When owners try to bid design-build projects the games start and the owners get less than they paid for," he says. "The selection process, the experience of the owner, and the relationship of the team are very important. The type of project has very little to do with the success of the project."

Many are similarly skeptical about the benefits of new information technology products such as three-dimensional building information modeling. "BIM offers some great efficiencies," Brady says. "Whether it will offer improved quality is yet to be seen."

Brady says owners want a faster and more coordinated building process, and some of that increased speed could come from BIM, but "it could be a while for innovations to take hold."

Eben, the AIA New Jersey president, for example, still draws on paper in his private architecture and planning practice and never uses computers. "But I'm old," he adds. "Everybody is being pressed to get the job done faster at all times, and technology helps."

Lerner says Stantec is starting to get involved with BIM a "little bit," using the CATIA software system provided by Gehry Technologies of Los Angeles. He says that more commonly, Stantec uses laser scanning of buildings, which maps out a structure in three dimensions by creating a cloud of points that can be easily converted to a 3-D computer model.

For Lerner, projects are slowed less by not adopting new technology, as by an increase in the documentation required. He says that among the culprits is the advent of e-mail.

“Just to come to a decision with e-mail now, it all has to be documented,” he says. “Before it was done by phone, or one-on-one, but now with e-mail you can cc everybody.”

He says government agencies also require more documentation than they used to, while clients require more documentation just to understand what the agencies require. “It takes a lot more documentation now to get to the final product,” he says

Some of the multiplying paperwork, Lerner says, is also the result of building “green” according to LEED standards. Lerner is a LEED-certified professional, meaning he is trained to identify points that count toward giving a project LEED certification.

Della Rocca says his firm STB Group has over 100 certified professionals. “LEED is certainly becoming more mainstream,” he adds. “Sustainability is a much more commonplace expectation for owners.”

But many see an official LEED certification as unnecessary for a project, as long as the designer follows similar principles of sustainability and energy efficiency.

“It’s still a politically correct vanity kind of thing at this point,” says Baker. “The majority of projects are not going for it because it essentially amounts to a plaque in the lobby that you paid for.” Baker says his company advises clients extensively on energy efficient design and sustainable materials, but only about 20% of them opt to go through the official LEED point system.

Brady agrees that in general, sustainability and energy-efficient design are a growth sector, both in new construction and retrofitting old buildings. “It’s not something brand new,” he says. “Mechanical and electrical engineers have considered energy efficiency for years, but it’s in the design, the materials, or sometimes the building orientation. Some are further ahead of the curve than others.”

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